

## Wildlife and Botany Resources Leasing Assessment

### (BLM Sensitive Species, Big Game/Game Species, and Migratory Birds, federally listed species)

## Introduction/Background

The BLM’s Utah State Office conducts quarterly competitive lease sales to sell available oil and gas lease parcels. The decision as to which public lands and minerals are open for leasing and what leasing stipulations may be necessary was made in the Price Field Office Resource Management Plan (PFO RMP) in 2008. Constraints on leasing and any future development of split estate parcels are determined by the BLM in consultation with the appropriate surface management agency or the private surface owner, and Lease Notices can be added in the Sale Notice, Table 1. The following information in the report is for the Field Office Review of the parcels nominated for the December 2017 Competitive lease sale. In compliance with the National Environmental Policy Act (NEPA), an Environmental Assessment was prepared to further analyze issues of concern.

The PFO RMP states the BLM will implement the decisions of the selected plan in compliance with the Endangered Species Act, as amended. The BLM will conduct Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) on listed plant and animal species as necessary for individual actions taken under this plan. The BLM will not authorize any action that will contribute to the need to list any non-listed special status species (16 USC 1536 (a) and 50 CFR 402). Management of Bureau Sensitive Species falls under the BLM 6480 Manual, which establishes procedures for the management of species designated as BLM sensitive, and their habitat. The BLM shall designate Bureau sensitive species and implement measures to conserve these species and their habitats, to promote their conservation and reduce the likelihood and need for such species to be listed under ESA.

**Table 1 - Parcels and the stipulations/lease notices**

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	Parcel Number 2017														
	088	089	090	091	092	093	094	095	096	097	098	099	100	101	102
<b>Stipulation PFO RMP 2008</b>															
UT-S-260: Raptors	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UT-S-285: Migratory Bird Nesting	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UT-S-253: Desert Bighorn									X	X		X		X	X
<b>Lease Notice</b>															
Washington IM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UT-LN-21: Bighorn Sheep									X	X		X		X	X

UT-LN-25: White-Tailed Prairie Dog	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UT-LN-44: Raptors	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UT-LN-45: Migratory Bird	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UT-LN-49: Utah Sensitive Species	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UT-LN-51: Special Status Plants:	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UT-LN-104: Burrowing Owl Habitat	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
T&E-03: Endangered Fish of the Upper Colorado River Drainage Basin	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
T&E-05: Listed Plant Species	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
T&E-15:Wright Fishhook Cactus ( <i>Sclerocactus wrightiae</i> )	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
T&E-17: San Rafael Cactus ( <i>Pediocactus Despainii</i> )	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Documentation of potential or known BLM Sensitive or Federally Listed Wildlife Species and Conservation Agreement Species occurrence and suitable habitat within the lease parcels and information on the inclusion of appropriate lease notices and stipulations for BLM Sensitive Wildlife Species is provided in Table 2 and 3. The information in Table 2 and 3 is a result of a thorough review of the field office GIS shapefiles, documentation in the 2008 Price Field Office RMP, Utah Natural Heritage Program information, Utah Division of Wildlife species accounts, habitat designations and the Wildlife Action Plan 2015, and birds of conservation concern for region 16.

Documentation of potential or known UDWR Big Game and Other Game Species occurrence and suitable habitat within the lease parcels and information on the inclusion of appropriate lease notices and stipulations is provided in Table 4. The information in Table 4 is a result of a thorough review of the field office GIS shapefiles, documentation in the 2008 Price Field Office RMP, Utah Division of Wildlife habitat designations, and other references.

Documentation of potential or known Avian Species occurrence and suitable habitat within the lease parcels and information on the inclusion of appropriate lease notices and stipulations is provided in Table 5. The information in Table 5 is a result of a thorough review of the field office GIS shapefiles, documentation in the 2008 Price Field Office RMP, Utah Natural Heritage Program information, Utah Division of Wildlife species accounts, habitat designations and the Wildlife Action Plan 2015, and birds of conservation concern for region 16. There is some duplication with Table 1.

Documentation for botany resources including BLM Sensitive species and Federally listed species and associated suitable habitat within the lease parcels and information on the inclusion of appropriate lease notices and stipulations are provided in Table 4. The information in Table 4 is a

result of a thorough review of the field office inventory information, GIS shapefiles, documentation in the 2008 Price Field Office RMP and the biological opinion for the RMP, Utah Natural Heritage Program information, IPaC accessed on June 13 2017, and other references.

Table 1 - Parcels and the stipulations/lease notices

Table 2 – BLM Sensitive and Federally listed Wildlife Species and Conservation Agreement Species

Table 3 – BLM Sensitive and Federally listed Fish Species and Conservation Agreement Species

Table 4 - UDWR Big Game and Other Game Species – Parcel Documentation and Applicable Lease Notices and Stipulations

Table 5 – Avian Species – Parcel Documentation and Applicable Lease Notices and Stipulations

Table 6 - Botany Resources – Parcel Documentation and Applicable Lease Notices and Stipulations

## Wildlife

<b>Table 2 – BLM Sensitive and Federally Listed Wildlife Species and Conservation Agreement Species – Parcel Documentation and Applicable Lease Notices and Stipulations</b>						
<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>	<b>Species/ Suitable Habitat within Parcel (Yes/No)</b>	<b>Documentation for species/potential habitat occurrence in parcels</b>	<b>Lease Parcel ID (Parcel _USO)</b>	<b>Lease Stipulation or Lease Notice</b>
<b>Federally Listed Species</b>						
California Condor	<i>Gymnogyps californianus</i>	E	NO	No critical habitat within the lease parcels. A chance flyover is unlikely. California condors prefer mountainous country at low and moderate elevations, especially rocky and brushy areas near cliffs. Current breeding populations are restricted to California and Northern Arizona near the release sites.	na	na
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	T	NO	No critical habitat within the lease parcels. A chance flyover is unlikely. The spotted owl occupies a variety of	na	na

**Table 2 - BLM Sensitive and Federally Listed Wildlife Species and Conservation Agreement Species - Parcel Documentation and Applicable Lease Notices and Stipulations**

Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
				habitats in different parts of its range, including various forest types and steep rocky canyons. Some modeled Mexican Spotted Owls habitat occurs near the parcels requested in 2017 but greater than 0.5 miles away (1 small area is approximately 1 mile away, other areas are over 2 miles away), but no modeled habitat within the parcels, based upon Willey's 2000 GIS model.		
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E	NO	No critical habitat within the lease parcels. No suitable habitat occurs within the lease parcels. A chance flyover is unlikely. The southwestern willow flycatcher is found most frequently in riparian habitats, especially in areas of dense willow.	na	na
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	T	NO	No proposed critical habitat within the lease parcels. No suitable habitat occurs within the lease parcels. A chance flyover is unlikely. Yellow-billed cuckoos are considered a riparian obligate and are usually found in large tracts of cottonwood/willow habitats with dense sub-canopies (below 10 m [33 ft]). The riparian habitats present within the parcels do not provide suitable habitat based on habitat characteristics/requirements for yellow-billed cuckoos.	na	na
<b>Amphibians</b>						
Arizona toad	<i>Anaxyrus (Bufo) microscaphus</i>	SS	NO	No documented habitat or occurrences in Emery County. Species' range is continuous along the Virgin River and its tributaries in southwestern Utah, and southern Nevada, and in locations across Arizona and western New Mexico.	na	na
Columbia spotted frog	<i>Rana luteiventris</i>	CA	NO	No documented habitat or occurrences in Emery County. Inhabits a range of aquatic habitats including isolated desert springs, riverine wetlands, and high-altitude riparian areas. Breeds in shallow, warm water, often close	na	na

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				to shore and emergent vegetation. Spotted frogs live in spring seeps, meadows, marshes, ponds and streams, and other areas where there is abundant vegetation. Utah populations are located in the Bonneville Basin, and comprise the far southeastern extent of the species' overall range.		
Great Plains toad	<i>Bufo cognatus</i>	SS	YES	Found in prairies and grasslands. Use temporary and permanent water for breeding. Found only in SE corner of Utah. Rare in Utah but more common in the Great Plains. The toad has been found in Emery County. This species is an inhabitant of prairies and deserts. Emery County has areas mapped as high habitat value according to UDWR. The lease parcels contain desert seeps, springs and North Salt Wash. These areas have potential habitat for the toad. The NSO stipulation for Natural springs and Intermittent water sources will effectively protect this species and its habitat from disturbance associated with Oil and Gas development.	All	UT-S-126: NSO Natural Springs  UT-S-127: NSO – Intermittent and Perennial Streams  UT-LN-49: Utah Sensitive Species
Western (boreal) toad	<i>Bufo boreas</i>	CA	NO	No suitable habitat within the lease parcels. The toad occurs in a wide range of habitats in multiple mountain ranges in Utah typically at high elevations >7000 feet. The western toad is found in Emery County. However, the lease parcels are typical low elevation desert. The highest point within the parcels is approximately 6,200 feet and is very dry riparian and wetland habitat (UDWR 2003).	na	na
<b>Birds</b>						
American white pelican	<i>Pelecanus erythrorhynchus</i>	SS	NO	No suitable habitat within the lease parcels. No large bodies of water suitable for foraging, resting, or nesting.	na	na

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Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
				Very social, cooperatively feeding on small freshwater fish and traveling in groups; nest colonially on a small number of suitable islands free of disturbance.		
Bald eagle	<i>Haliaeetus leucocephalus</i>	SS	Yes	<p>The lease parcels contain suitable foraging habitat, although of marginal to low quality.</p> <p>Bald eagles occur in Emery county, chiefly during the winter. Wintering areas are commonly associated with open water, although in some areas, eagles use habitats with little or no open water if other food resources (e.g., rabbit or deer carrion) are readily available.</p> <p>Nearest winter roosts or nest are over 10 miles away. The implementation of stipulations to avoid nesting seasons would eliminate potential disturbance to a nesting eagle if found. The application of the LNs allow the opportunity to make adjustments at the site-specific level when an APD is received to reduce potential effects to the birds in the area.</p>	All	<p>UT-S-260: TL – Raptor Habitat</p> <p>UT-LN-44: Raptors</p> <p>UT-LN-45: Migratory Bird</p> <p>UT-LN-49: Utah Sensitive Species</p>
Black swift	<i>Cypseloides niger</i>	SS	NO	<p>No suitable habitat within the lease parcels. Occurs in mountainous regions of the western United States and Canada. An aerial insectivore, it is known only to nest near or behind waterfalls with suitable. A very rare breeder in Utah</p>	na	na
Bobolink	<i>Dolichonyx oryzivorous</i>	SS	NO	<p>No suitable habitat within the lease parcels. Breeds, nests, and forages in wet meadow, wet grassland, and irrigated agricultural areas that tend to be associated with riparian or wetland areas. This migratory bird may fly through the area; however, it is not known to nest within the parcels.</p>	na	na

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Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
Burrowing owl	<i>Athene cunicularia</i>	SS	Yes	Suitable habitat occurs within the lease parcels. Burrowing owls Emery County. This species prefers open areas within deserts, grasslands, and sagebrush steppe communities. This small terrestrial crepuscular owl nests and roosts in underground burrows in open and short-grass habitats. Burrows are often dug by mammals such as prairie dogs. Habitat consists of well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground such as moderately or heavily grazed pasture. The implementation of stipulations to avoid nesting seasons would eliminate potential disturbance to a nesting bird if found. The application of the LNs allow for the opportunity to make adjustments at the site specific level when an APD is received to reduce potential effects to the birds in the area.	All	UT-S-260: TL - Raptor Habitat  UT-S-285: TL - Migratory Bird Nesting  UT-LN-45: Migratory Bird  UT-LN-49: Utah Sensitive Species
Ferruginous hawk	<i>Buteo regalis</i>	SS	YES	Suitable foraging habitat occur in all lease parcels. Suitable nesting habitat is limited. Ferruginous hawks are distributed throughout most of Utah. Breeding ferruginous hawks rely on grassland or shrubsteppe terrain and in many parts of Utah nest on the ecotone between these habitats and pinyon-juniper woodlands. Juniper trees are the primary nesting substrate in Utah, but will also nest on the ground or power line structures. The implementation of stipulations to avoid nesting seasons would eliminate potential disturbance to a nesting bird if found. The application of the LNs allow for the opportunity to make adjustments at the site specific level when an APD is received to reduce potential effects to the birds in the area.	All	UT-S-260: TL - Raptor Habitat  UT-LN-44: Raptors  UT-S-285: TL - Migratory Bird Nesting  UT-LN-45: Migratory Bird  UT-LN-49: Utah Sensitive Species

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Grasshopper sparrow	<i>Ammodramus savannarum</i>	SS	NO	No suitable nesting habitat occurs within the lease parcels. The species typically nest in grassland type habitats. This migratory bird may fly through the area, forage or rest. However, it is not known to nest within the parcels.	All	UT-LN-45: Migratory Bird  UT-LN-49: Utah Sensitive Species
Greater sage- grouse	<i>Centrocercus urophasianus</i>	SS	NO	No PHMA or GHMA within the lease parcels. Managed under the GRSG ARMPA. Breeds and nest in sagebrush dominate shrublands. Considered a sagebrush obligate species. Year-long resident of sagebrush steppe habitats.  Greater sage-grouse populations are documented Emery County. The greater sage-grouse is an herbivore and insectivore and is associated with both tall and short sagebrush types. Greater sage-grouse inhabit sagebrush plains, foothills, and mountain valleys at elevations from 4,000 to more than 9,000 feet and are highly dependent on sagebrush for food and cover (USFWS 2005). Sagebrush, understory of grasses and forbs, and associated wet meadow areas are essential for optimum habitat. Greater sage-grouse exist on State, private, and BLM lands in the Emma Park, Whitmore Park, West Tavaputs, and Gordon Creek areas.	na	na
Lewis' woodpecker	<i>Melanerpes lewis</i>	SS	Yes	Marginal suitable habitat occurs within the lease parcels. The bird may fly through the area. The majority of the breeding habitat consists of open park-like ponderosa pine forests, but they are also found in mixed conifer, pinyon-juniper, riparian and oak woodlands. They have also been found in the fringes of pine and juniper stands, and deciduous forests, and riparian cottonwood bottoms. Wintering grounds are spread over a wide range of habitats. The implementation of stipulations to avoid	All	UT-S-285: TL – Migratory Bird Nesting  UT-LN-45: Migratory Bird  UT-LN-49: Utah Sensitive Species

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Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
				nesting seasons would eliminate potential disturbance to a nesting bird if found. The application of the LNs allow for the opportunity to make adjustments at the site specific level when an APD is received to reduce potential effects to the birds in the area.		
Long-billed curlew	<i>Numenius americana</i>	SS	Yes	No suitable habitat within the lease parcels. Long-billed curlew is a migratory species present within Emery County. Typically nest in habitats that contain short grasses, a bare ground component, shade, and abundant vertebrate prey, usually in uncultivated rangelands and pastures. Chance flyover or brief foraging stops are possible at the riparian sites within the lease parcels.	All	UT-LN-45: Migratory Bird  UT-LN-49: Utah Sensitive Species
Northern goshawk	<i>Accipiter gentiles</i>	CA	NO	No suitable habitat within the lease parcels. This species is known to occur in Emery County. The northern goshawk prefers mature mountain forest and riparian zone habitats. The lease parcels are lowland desert.	na	na
Sharp-tailed grouse	<i>Tympanuchus phasianellus</i>	SS	NO	No suitable habitat within Emery County. Species is limited to Northern Utah. Bunch-grass areas of the foothills and benches interspersed with deciduous shrubs is the preferred habitat.	na	na
Short-eared owl	<i>Asio flammeus</i>	SS	Yes	Potential wintering habitat occurs within the parcels. Inhabits and nests in arid grasslands, agricultural areas, marshes, and occasionally open woodlands throughout Utah. In Utah, cold desert shrub and sagebrush-rabbitbrush habitats are also utilized. The short-eared owl is an open country, ground-nesting species that occupies grasslands. The implementation of stipulations to avoid nesting seasons would eliminate potential disturbance to a nesting bird if found. The application of the LNs allow for the opportunity to make adjustments at	All	UT-S-260: TL – Raptor Habitat  UT-LN-45: Migratory Bird  UT-LN-49: Utah Sensitive Species

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				the site specific level when an APD is received to reduce potential effects to the birds in the area.		
Snowy plover	<i>Charadrius alexandrinus</i>	SS	NO	No suitable habitat within the lease parcels. Nests on coastal beaches, and inland at salt flats, playas, river sandbars, alkaline lakes, and agricultural ponds. Occurs in North America and South America, along the Pacific and Gulf of Mexico coasts, nest mainly in northern Utah in playa habitats surrounding Great Salt Lake.	na	na
Three-toed woodpecker	<i>Picoides tridactylus</i>	SS	NO	No suitable habitat within the lease parcels. This species can be found in spruce, sub-alpine fir, Douglas fir, grand fir, ponderosa pine, tamarack, aspen and lodgepole pine forests. They nest in dead and live trees in excavated cavities.	na	na
<b>Insects</b>						
Coral Pink Sand Dunes Tiger Beetle	<i>Cicindela albissima</i>	CN	NO	No suitable habitat within Emery County	na	na
<b>Mammals</b>						
Allen's big-eared bat	<i>Idionycteris phyllotis</i>	SS	NO	No suitable habitat within Emery County. The species is managed under the Bat Conservation Plan. It is known from a range of habitats including shrublands, woodlands, and forests. It is an insectivore. The species is known in the La Sal Mountains, Henry Mtns, Capitol Reef National Park, GSENM, and St. George Southward. Many threats including white nose syndrome.	na	na
Big free-tailed bat	<i>Nyctinomops macrotis</i>	SS	Yes	No suitable maternity roosting habitat within the lease parcels. Suitable habitat occurs in Emery County, use of the lease parcels for foraging is possible. The species is	All	UT-LN-49: Sensitive Species

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				managed under the Bat Conservation Plan. The species often roosts and forms maternity colonies in massive sandstone cliffs near bodies of open water. It is an insectivore. They are rare in Utah, substantial value habitat is mapped within Emery County. Many threats including white nose syndrome. The application of the LNs allow for the opportunity to make adjustments at the site specific level when an APD is received to reduce potential effects to the species in the area.		
Dark kangaroo mouse	<i>Microdipodops megacephalus</i>	SS	NO	No suitable habitat within Emery County. The species occurs in the West Desert. Habitat generally consists of sand, semi-desert shrubland with sparse vegetative cover in the Great Basin.	na	na
Fringed myotis	<i>Myotis thysanodes</i>	SS	Yes	Suitable habitat for maternity roosting occurs within the lease parcels. Fringed myotis are found primarily in desert, grassland, and woodland habitats; and roost in caves, mines, rock crevices, buildings, and other protected sites. The species is managed under the Bat Conservation Plan. They are insectivorous, with beetles a common prey item. The greatest threat is human disturbance of roost sites, especially maternity colonies, through recreational caving and mine exploration (Natureserve 2008). Many threats including white nose syndrome. The application of the LNs allow for the opportunity to make adjustments at the site specific level when an APD is received to reduce potential effects to the species in the area.	All	UT-LN-49: Sensitive Species
Gunnison prairie dog	<i>Cynomys gunnisoni</i>	SS	NO	No suitable habitat within Emery County. Active colonies are found in Grand and San Juan Counties. This species is managed under the Utah Gunnison's prairie dog and white-tailed prairie dog conservation plan.	na	na

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Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
Kit fox	<i>Vulpes macrotis</i>	SS	Yes	Suitable habitat occurs within the lease parcels. The 2014 habitat model for Kit fox indicates a high probability of kit fox occurrence within the parcels identified for leasing. Kit foxes live primarily in open desert, shrubby or shrub-grass habitat; shadscale, greasewood or sagebrush. The primary food item is usually the most abundant nocturnal rodent or lagomorph in the area. Kit foxes may also feed opportunistically on birds, reptiles, and insects. Several dens may be used, especially in summer (Natureserve 2008). The application of the LNs allow for the opportunity to make adjustments at the site specific level when an APD is received to reduce potential effects to the species in the area.	All	UT-LN-49: Sensitive Species
Preble's shrew	<i>Sorex preblei</i>	SS	NO	No suitable habitat within the lease parcels. A rare shrew. It is known from Tooele and Boxelder Counties. Little is known about the habitat requirements. Typically found arid or semi-arid grass-shrubland associations, sagebrush areas, wet areas. The lease parcels are very dry, almost bad-land and devoid of vegetation.	na	na
Pygmy rabbit	<i>Brachylagus idahoensis</i>	SS	NO	No suitable habitat within the lease parcels. The rabbit is known from the Great Basin and adjacent intermountain regions.	na	na
Silky pocket mouse	<i>Perognathus flavus</i>	SS	NO	No suitable habitat within the lease parcels. Narrowly distributed in Utah, occurring in San Juan County. Feeds on seeds in sandy soils of arid grasslands.	na	na
Spotted bat	<i>Euderma maculatum</i>	SS	Yes	Suitable habitat occurs within the lease parcels. Some parcels contain suitable roosting habitat, and others contain suitable foraging habitat. There are no known populations at this time. Spotted bats are found in various habitats from desert to montane coniferous stands, including pinyonjuniper woodland, canyon bottoms, open	All	UT-LN-49: Sensitive Species

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				pasture, and hayfields. They roost in caves, in cracks, and crevices in cliffs and canyons. Spotted bats apparently feed primarily on noctuid moths and sometimes beetles. They are managed under the Utah Bat conservation Plan. The two highest threats to spotted bats appear to be collection of specimens by humans and the use of pesticides that the bats may accumulate through their diet and that kill their prey (Natureserve 2008). The application of the LNs allow for the opportunity to make adjustments at the site specific level when an APD is received to reduce potential effects to the species in the area.		
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SS	Yes	Suitable foraging habitat (marginal) occurs within the lease parcels. These species potentially occur throughout Utah. However, they depend on caves and mines year round for maternity colonies and hibernacula, which are not known to occur within the lease parcels. The application of the LNs allow for the opportunity to make adjustments at the site specific level when an APD is received to reduce potential effects to the species in the area.	All	UT-LN-49: Sensitive Species
Western red bat	<i>Lasiurus blossevillii</i>	SS	NO	The western red bat is very rare in Utah and is sparsely distributed within north-central, central, and southwestern regions of the State. Western red bats roost in the foliage of cottonwood trees and are dependent on broadleaf shrubs and trees in lowland riparian zones below 5,700 feet elevation. Loss of riparian habitat is the main threat to western red bat (UDWR 2003).	na	na
White-tailed prairie dog	<i>Cynomys leucurus</i>	SS	Yes	Suitable habitat occurs within the lease parcels. No colonies were observed during site visits, and there are no records of existing colonies. Much of the lease parcels do	All	UT-LN-49: Sensitive Species

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				not contain suitable habitat for burrows. White-tailed prairie dogs require deep, well-drained soils for development of burrows. A majority the WTPD habitat occurs in semi-arid to arid areas with mixed stands of shrubs and grasses. This species is managed under the Utah Gunnison 's prairie dog and white-tailed prairie dog conservation plan. The application of the LNs allow for the opportunity to make adjustments at the site specific level when an APD is received to reduce potential effects to the species in the area.		UT-LN-25: white-tailed and Gunnison prairie dog.
<b>Reptiles</b>						
Common chuckwalla	<i>Sauromalus ater</i>	SS	NO	No suitable habitat within Emery County. This species is restricted to the southern portion of the state. Chuckwallas are commonly found near cliffs, boulders, and rocky slopes.	na	na
Cornsnake	<i>Elaphe guttata</i>	SS	NO	No suitable habitat within Emery County. Corn snakes are found near streams, or in rocky habitats, in the eastern portion of the state. Occurrences are known from Grand and San Juan Counties.	na	na
Desert iguana	<i>Dipsosaurus dorsalis</i>	SS	NO	No suitable habitat within Emery County. The species is restricted to the extreme SW corner of the state and typically associated with creosote bush in Utah.	na	na
Desert night lizard	<i>Xantusia vigilis</i>	SS	NO	No suitable habitat within Emery County. The species is mainly associated with Joshua trees. Occurrences are rare in Utah, common in the Mojave.	na	na
Gila monster	<i>Heloderma suspectum</i>	SS	NO	No suitable habitat within Emery county. The species is restricted to the SW corner of the state and typically associated with creosote bush in Utah.	na	na
Mojave rattlesnake	<i>Crotalus scutulatus</i>	SS	NO	No suitable habitat within Emery county. The species is restricted to the SW corner of the state and typically	na	na

**Table 2 - BLM Sensitive and Federally Listed Wildlife Species and Conservation Agreement Species - Parcel Documentation and Applicable Lease Notices and Stipulations**

Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
				associated with barren desert and desert scrub habitats in Utah.		
Sidewinder	<i>Crotalus cerastes</i>	SS	NO	No suitable habitat within Emery county. The species is restricted to the SW corner of the state and prefer open sandy habitats.	na	na
Smooth Greensnake	<i>Ophedrys vernalis</i>	SS	NO	No suitable habitat within the lease parcels. In Utah the species is known from the La Sal, Wasatch, Uinta, and Abajo mtns. The species is found in marshes, meadows, open woods, and stream edges, abandoned farmland, and vacant lots. Smooth greensnakes lay their eggs under rotting wood, underground, and under rocks. This species consumes small terrestrial insects and spiders (Natureserve 2005). Threats include loss of habitat through livestock grazing, recreation, and human development (UDWR 2003).	na	na
Speckled rattlesnake	<i>Crotalus mitchellii</i>	SS	NO	No suitable habitat within Emery County. The species is restricted to the Mojave desert in Utah.	na	na
Western banded gecko	<i>Coleonyx variegatus</i>	SS	NO	No suitable habitat within Emery County. The species is restricted to the Mojave desert in Utah.	na	na
Western threadsnae	<i>Leptotyphlops humilis</i>	SS	NO	No suitable habitat within Emery County. The species is restricted to the SW corner of the state, in Washington County.	na	na
Zebra-tailed lizard	<i>Callisaurus draconoides</i>	SS	NO	No suitable habitat within Emery County. The species is restricted to the SW corner of the state, in Washington County.	na	na

Table 3 – BLM Sensitive and Federally listed Fish Species and Conservation Agreement Species – Parcel Documentation and Applicable Lease Notices and Stipulations

Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
<b>BLM Sensitive Fishes</b>						
Bluehead sucker	<i>Catostomus discobolus</i>	CA	NO	No Suitable habitat occurs within the lease parcels. Found in the Colorado, Snake, and Bonneville River Basins. Occurs in mainstem and tributary locations. Is able to persist in some reservoirs.	na	na
Bonneville Cutthroat Trout	<i>Oncorhynchus clarkii utah</i>	CA	NO	No Suitable habitat occurs within Emery County. Occur in streams and high lakes in the Bonneville Basin.	na	na
Colorado River cutthroat trout	<i>Oncorhynchus clarkii pleuriticus</i>	CA	NO	No Suitable habitat occurs within the lease parcels. Need cool, well-oxygenated water. Occur in streams and high lakes in the Colorado River Basin.	na	na
Desert sucker	<i>Catostomus clarkii</i>	CA	NO	No Suitable habitat occurs within the lease parcels. Found in small to medium size rivers with gravel substrate in the Virgin River Basin in Utah, the lower Colorado River and other systems in the desert southwest.	na	na
Flannelmouth sucker	<i>Catostomus latipinnis</i>	CA	NO	No Suitable habitat occurs within the lease parcels. The species occurs in the main-stem Colorado River, as well as in many of the Colorado River's large tributaries.	na	na
Least chub	<i>Iotichthys phlegethontis</i>	CA	NO	No Suitable habitat occurs within Emery County. Endemic to the Bonneville Basin of Utah. Small cyprinid that inhabits spring and wetland systems.	na	na
Northern leatherside chub	<i>Lepidomeda copei</i>	CA	NO	No Suitable habitat occurs within the lease parcels. The species is a small minnow native to streams and rivers of the southeastern portion of the Bonneville Basin	na	na
Roundtail chub	<i>Gila robusta</i>	CA	NO	No Suitable habitat occurs within the lease parcels. A fairly large minnow native to the Colorado River system of	na	na

Table 3 – BLM Sensitive and Federally listed Fish Species and Conservation Agreement Species – Parcel Documentation and Applicable Lease Notices and Stipulations

Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
				the western United States. The species prefers large rivers, and is most often found in murky pools near strong currents in the main-stem Colorado River, and in the Colorado River's large tributaries.		
Southern leatherside chub	<i>Lepidomeda aliciae</i>	CA	NO	No Suitable habitat occurs within the lease parcels. The species is a small minnow native to streams and rivers of the southeastern portion of the Bonneville Basin	na	na
Virgin spinedace	<i>Lepidomeda mollispinis mollispinis</i>	CA	NO	No Suitable habitat occurs within Emery County. The species is a small minnow originally found throughout the Virgin River system of Utah, Nevada, and Arizona.	na	na
Yellowstone cutthroat trout	<i>Oncorhynchus clarkii bouvieri</i>	CA	NO	No Suitable habitat occurs within the lease parcels. Need cool, well-oxygenated water. Occur in streams and high lakes where stocked.	na	na
Federally Liststed Fish						
Bonytail	<i>Gila elegans</i>	E	NO	Habitat is not present within the proposed project area; however, water depletion is anticipated to occur. All parcels are located within the Upper Colorado River Basin which has occurrences of this species and designated critical habitat. Prefers swift, deep canyon bound reaches.  Water depletions from any portion of the Upper Colorado River drainage basin above Lake Powell are considered to adversely affect or adversely modify the critical habitat of the four resident endangered fish species. Formal consultation with USFWS is required for all depletions. All depletion amounts must be reported to BLM. As analyzed in the RMP and the BO, the application of the LNs allow the opportunity to make adjustments at the site-specific level when an APD is received to reduce potential effects to the species.	All	T&E-03: Endangered Fish of the Upper Colorado River Drainage Basin

Table 3 – BLM Sensitive and Federally listed Fish Species and Conservation Agreement Species – Parcel Documentation and Applicable Lease Notices and Stipulations

Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
Colorado pikeminnow	<i>Ptychocheilus lucius</i>	E	NO	<p>Habitat is not present within the proposed project area; however, water depletion is anticipated to occur. All parcels are located within the Upper Colorado River Basin which has occurrences of this species and designated critical habitat.</p> <p>Water depletions from any portion of the Upper Colorado River drainage basin above Lake Powell are considered to adversely affect or adversely modify the critical habitat of the four resident endangered fish species. Formal consultation with USFWS is required for all depletions. All depletion amounts must be reported to BLM. As analyzed in the RMP and the BO, the application of the LNs allow the opportunity to make adjustments at the site-specific level when an APD is received to reduce potential effects to the species.</p> <p>Current populations are relatively stable in size and distribution, but much reduced from historic levels. Occurs in mainstem and tributary locations.</p>	All	T&E-03: Endangered Fish of the Upper Colorado River Drainage Basin
humpback chub	<i>Gila cypha</i>	E	NO	<p>Habitat is not present within the proposed project area; however, water depletion is anticipated to occur. All parcels are located within the Upper Colorado River Basin which has occurrences of this species and designated critical habitat.</p> <p>Water depletions from any portion of the Upper Colorado River drainage basin above Lake Powell are considered to adversely affect or adversely modify the critical habitat of the four resident endangered fish species. Formal</p>	All	T&E-03: Endangered Fish of the Upper Colorado River Drainage Basin

Table 3 – BLM Sensitive and Federally listed Fish Species and Conservation Agreement Species – Parcel Documentation and Applicable Lease Notices and Stipulations

Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation or Lease Notice
				<p>consultation with USFWS is required for all depletions. All depletion amounts must be reported to BLM. As analyzed in the RMP and the BO, the application of the LNs allow the opportunity to make adjustments at the site-specific level when an APD is received to reduce potential effects to the species.</p> <p>Restricted to deep, swift, canyon-bound reaches of large rivers. Require eddies and sheltered shorelines maintained by high spring flows.</p>		
razorback sucker	<i>Xyrauchen texanus</i>	E	NO	<p>Habitat is not present within the proposed project area; however, water depletion is anticipated to occur. All parcels are located within the Upper Colorado River Basin which has occurrences of this species and designated critical habitat.</p> <p>Water depletions from any portion of the Upper Colorado River drainage basin above Lake Powell are considered to adversely affect or adversely modify the critical habitat of the four resident endangered fish species. Formal consultation with USFWS is required for all depletions. All depletion amounts must be reported to BLM. As analyzed in the RMP and the BO, the application of the LNs allow the opportunity to make adjustments at the site-specific level when an APD is received to reduce potential effects to the species.</p> <p>Reliant on periodic inundation of floodplain habitats to complete life cycle. Occurs in mainstem and tributary locations.</p>	All	T&E-03: Endangered Fish of the Upper Colorado River Drainage Basin

Table 4. UDWR Big Game and Other Game Species – Parcel Documentation and Applicable Lease Notices and Stipulations					
Common Name	Species/ Suitable Habitat within Lease Parcel (Yes/No)	season and value of habitat,	Documentation for species/potential habitat occurrence in parcels and 1) documentation of adequate stipulations analyzed in the RMP and 2) recommendation and rationale on carrying forward a species for detailed analysis in NEPA or NI on IDT Checklist.	Lease Parcel ID (Parcel _USO)	Lease Stipulation or lease notice
<b>Birds</b>					
Band-tailed pigeon	NO	na	No suitable habitat within the lease parcels. Nests in mountainous forest and woodland habitats. Gregarious, flocks are nomadic during fall and winter. Known occurrences in the La Sal Mtns.	na	na
Dusky grouse/Blue Grouse	NO	na	No suitable habitat within the lease parcels. A forest grouse, open stands of conifer or aspen are preferred habitat.	na	na
California quail	NO	na	No suitable habitat within the lease parcels. An introduced species from the pacific coast states. The species prefers brushy areas adjacent to cultivated lands, particularly along streams.	na	na
Chukar	Yes	Substantial value	Minor pockets of substantial value habitat near or within the lease parcels. An introduced species from the middle east and southern Asia. The species need steep, rocky, semi-arid slopes. Preference for juniper and large boulders in the talus slope. The lack of available water limits the value of the potential habitat.	All	na
Gambel's quail	NO	na	No suitable habitat within the lease parcels. The species prefers brushy thickets of the Mohave desert and irrigated field in southern Utah. High value habitat is mapped in Emery County.	na	na
Hungarian partridge	NO	na	No suitable habitat within Emery County. The species prefers grasslands or sagebrush grasslands near cultivated fields. Most of the mapped habitat is in the northern portion of Utah.	na	na
Ring-necked pheasant	NO	na	No suitable habitat occurs within the lease parcels. This introduced bird prefers agricultural areas, irrigated farmlands. Mapped critical value habitat occurs in Emery County.	na	na
Ruffed grouse	NO	na	No suitable habitat within the lease parcels. A forest grouse, open stands of conifer or aspen brushy woodlands adjacent to streams or springs are preferred habitat. Critical and high value habitat occur in the Manti NF	na	na

Table 4. UDWR Big Game and Other Game Species – Parcel Documentation and Applicable Lease Notices and Stipulations					
Common Name	Species/ Suitable Habitat within Lease Parcel (Yes/No)	season and value of habitat,	Documentation for species/potential habitat occurrence in parcels and 1) documentation of adequate stipulations analyzed in the RMP and 2) recommendation and rationale on carrying forward a species for detailed analysis in NEPA or NI on IDT Checklist.	Lease Parcel ID (Parcel _USO)	Lease Stipulation or lease notice
Sharp-tailed grouse	No	na	No suitable habitat within Emery County. Species is limited to Northern Utah. Species prefers the bunch grass foothills and benches with deciduous shrubs.	na	na
White-tailed ptarmigan	No	na	No suitable habitat within Emery County. Species is limited to the Uinta Mtns in Utah.	na	na
Wild Turkey (Merriam's and Rio Grande)	No	na	No suitable habitat occurs within the lease parcels. The rio grand species prefer cottonwood river bottoms. The short segment of the satl wash within the parcels doesn't provide suitable habitat for turkeys due to the low tree and shrub cover and the quality and duration of the water.	na	na
<b>Mammals</b>					
American Bison	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na
Black Bear	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na
California Bighorn Sheep	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na
Desert Bighorn Sheep	Yes	Crucial year long, 5,335 ac.	Some of the parcels are identified by the UDWR as crucial year round habitat for desert bighorn sheep (UDWR 2008) and the Price RMP Map R-8. Development of the leases would not fragment the identified habitat because the parcels just encompasses the outer edge of the identified habitat. Within the entire area requested for lease in the PFO, there are 5,335 ac of crucial yearlong habitat for desert bighorn sheep. The habitat within the parcels is limited by suitable cliff habitat and available water sources as evident by the location at the outer edge of the designated habitat. The implementation of stipulations to avoid lambing seasons would eliminate potential disturbance during a crucial time period. Application of the lease notice will provide the opportunity at the development stage to reduce potential impacts to the species.	96, 97, 99, 101, 102	UT-LN-21 Bighorn Sheep  UT-S-253 Price – desert bighorn sheep

Table 4. UDWR Big Game and Other Game Species – Parcel Documentation and Applicable Lease Notices and Stipulations					
Common Name	Species/ Suitable Habitat within Lease Parcel (Yes/No)	season and value of habitat,	Documentation for species/potential habitat occurrence in parcels and 1) documentation of adequate stipulations analyzed in the RMP and 2) recommendation and rationale on carrying forward a species for detailed analysis in NEPA or NI on IDT Checklist.	Lease Parcel ID (Parcel _USO)	Lease Stipulation or lease notice
Elk	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na
Moose	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na
Mountain Goat	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na
Mule Deer	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na
Pronghorn	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na
Rocky Mountain Bighorn Sheep	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na
Snowshoe Hare	NO	na	No designated habitat occurs within the parcels according to the recent UDWR shapefiles and the Price RMP	na	na

**Table 5. Avian Species – Parcel Documentation and Applicable Lease Notices and Stipulations**

Avian Species	BLM Sensitive Species	IPaC list of potential species	Birds of Conservation Concern – Region 16 (Southern Rockies/Colorado Plateau)	Utah Partner's in Flight-Priority Species	Habitat Types (PIF)			Project Occurrence and Potential Assessment
					Primary Breeding Habitat	Secondary Breeding Habitat	Winter Habitat	
Abert's towhee				X	Lowland Riparian	Lowland Riparian	Lowland Riparian	No suitable breeding habitat.
American Avocet				X	Wetland	Playa	Migrant	No suitable breeding habitat.
American golden plover					Wetland	Playa	Migrant	No suitable breeding habitat
American white pelican	X			X	Water	Wetland	Migrant	No suitable breeding habitat
Bald eagle	X	X	X		Lowland Riparian	Agriculture	Lowland Riparian	No suitable breeding habitat
Bell's vireo				X	Lowland Riparian	Lowland Riparian	Migrant	No suitable breeding habitat.
Black rosy-finch		X	X	X	Alpine	Alpine	Grassland	No suitable breeding habitat
Black swift	X			X	Lowland Riparian	Cliff	Migrant	No suitable breeding habitat
Black-necked stilt				X	Wetland	Playa	Migrant	No suitable breeding habitat
Black-throated gray warbler				X	Pinyon-Juniper	Mountain Shrub	Migrant	Potential to occur in the parcels with PJ.
Bobolink	X			X	Wet Meadow	Agriculture	Migrant	No suitable breeding habitat
Brewer's sparrow		X	X	X	Shrubsteppe	High Desert Scrub	Migrant	No suitable breeding habitat
Broad-tailed hummingbird				X	Lowland Riparian	Mountain Riparian	Migrant	No suitable breeding habitat
Burrowing owl	X	X	X		High Desert Scrub	Grassland	Migrant	Potential to occur, limited by suitable soils for burrows.

**Table 5. Avian Species – Parcel Documentation and Applicable Lease Notices and Stipulations**

Avian Species	BLM Sensitive Species	IPaC list of potential species	Birds of Conservation Concern – Region 16 (Southern Rockies/Colorado Plateau)	Utah Partner's in Flight-Priority Species	Habitat Types (PIF)			Project Occurrence and Potential Assessment
					Primary Breeding Habitat	Secondary Breeding Habitat	Winter Habitat	
Calliope hummingbird		X			Sub-Alpine Conifer	Alpine	Migrant	No suitable breeding habitat
Cassin's finch		X	X		Aspen	Sub-Alpine Conifer	Lowland Riparian	No suitable breeding habitat
Ferruginous hawk	X	X	X	X	Pinyon- Juniper	Shrubsteppe	Grassland	Potential to occur, limited by sparse prey base in the area
Flammulated owl		X	X		Ponderosa Pine	Sub-Alpine Conifer	Migrant	No suitable breeding habitat
Fox Sparrow		X			Mountain Riparian	Mountain Shrub	Migrant	No suitable breeding habitat
Gambel's quail				X	Low Desert Scrub	Lowland Riparian	Low Desert Scrub	No potential habitat within lease parcels.
Golden eagle		X			Cliff	High Desert Scrub	High Desert Scrub	Potential habitat within the lease parcels.
Grasshopper sparrow	X		X		Grassland	Grassland	Migrant	No suitable breeding habitat.
Gray vireo		X	X	X	Pinyon-Juniper	Northern Oak	Migrant	Potential habitat within the lease parcels
Greater sage-grouse	X	X	X	X	Shrubsteppe	Shrubsteppe	Shrubsteppe	No suitable breeding habitat.
Juniper titmouse		X	X		Pinyon-Juniper	Pinyon-Juniper	Pinyon-Juniper	Potential habitat within the lease parcels.
Lewis's woodpecker	X	X	X	X	Ponderosa Pine	Lowland Riparian	Northern Oak	No suitable breeding habitat

**Table 5. Avian Species – Parcel Documentation and Applicable Lease Notices and Stipulations**

Avian Species	BLM Sensitive Species	IPaC list of potential species	Birds of Conservation Concern – Region 16 (Southern Rockies/Colorado Plateau)	Utah Partner's in Flight-Priority Species	Habitat Types (PIF)			Project Occurrence and Potential Assessment
					Primary Breeding Habitat	Secondary Breeding Habitat	Winter Habitat	
Loggerhead Shrike		X			High Desert Scrub	Pinyon-Juniper	High Desert Scrub	Potential habitat within the lease parcels.
Long-billed curlew	X	X	X	X	Grassland	Agriculture	Migrant	No suitable breeding habitat.
Lucy's warbler				X	Lowland Riparian	Low Desert Scrub	Migrant	No suitable breeding habitat
Mountain plover	X		X	X	High Desert Scrub	High Desert Scrub	Migrant	No suitable breeding habitat.
Northern goshawk	X		X		Lodgepole Pine	Aspen	Lowland Riparian	No suitable breeding habitat
Olive-sided Flycatcher		X			Sub-Alpine Conifer	Alpine	Migrant	No suitable breeding habitat.
Pinyon jay		X	X		Pinyon-Juniper	Ponderosa Pine	Pinyon-Juniper	Potential habitat within the lease parcels.
Peregrine falcon		X	X		Cliff	Lowland Riparian	Wetland	Marginal cliff and lowland riparian. Unlikely to occur
Prairie falcon		X	X		Cliff	High Desert Scrub	Agriculture	Marginal cliff and High desert scrub. No agriculture. Unlikely to occur.
Rufous Hummingbird		X			mixed Conifer	Aspen	Migrant	No suitable breeding habitat
Sage sparrow				X	Shrubsteppe	High Desert Scrub	Low Desert Scrub	No suitable breeding habitat
Sage Thrasher		X			Shrubsteppe	Shrubsteppe	Migrant	No suitable breeding habitat

**Table 5. Avian Species – Parcel Documentation and Applicable Lease Notices and Stipulations**

Avian Species	BLM Sensitive Species	IPaC list of potential species	Birds of Conservation Concern – Region 16 (Southern Rockies/Colorado Plateau)	Utah Partner's in Flight-Priority Species	Habitat Types (PIF)			Project Occurrence and Potential Assessment
					Primary Breeding Habitat	Secondary Breeding Habitat	Winter Habitat	
Sharp-tailed grouse	<b>X</b>			<b>X</b>	Shrubsteppe	Grassland	Shrubsteppe	No potential habitat within lease parcels.
Short-eared owl	<b>X</b>	<b>X</b>			Wetland	Grassland	Agriculture	No suitable breeding habitat
Snowy plover	<b>X</b>		<b>X</b>		Playa	Playa	Migrant	No suitable breeding habitat
Swainsons hawk		<b>X</b>			Agriculture	Aspen	Migrant	No potential habitat within lease parcels.
Three-toed woodpecker	<b>X</b>			<b>X</b>	Sub-Alpine Conifer	Lodgepole Pine	Sub-Alpine Conifer	No potential habitat within lease parcels.
Virginia's warbler		<b>X</b>		<b>X</b>	Northern Oak	Pinyon-Juniper	Migrant	No suitable breeding habitat
Western Grebe		<b>X</b>			Water	Wetland	Migrant	No potential habitat within lease parcels.
Williamson's Sapsucker		<b>X</b>			Sub-Alpine Conifer	Aspen	Migrant	No potential habitat within lease parcels.
Willow flycatcher		<b>X</b>			Lowland Riparian	Lowland Riparian	Migrant	No suitable breeding habitat
Yellow-billed cuckoo	<b>X</b>		<b>X</b>	<b>X</b>	Lowland Riparian	Agriculture	Migrant	No suitable breeding habitat

## Botany

Table 6. Botany Resources – Parcel Documentation and Applicable Lease Notices and Stipulations						
Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation Or Lease Notice
Barneby Reed- mustard	<i>Schoenocrambe barnebyi</i>	Endangered	NO	No suitable habitat within the Lease Parcels. No critical habitat has been designated for this species. Endemic to Emery and Wayne Counties, Utah. Occurs on the Chinle Formation in mixed shadscale, buckwheat, and Mormon tea communities between 4,800' and 6,500' elevation. – known populations are within the boundary of Capitol Reef National Park west of Fruita and in the southern portion of the San Rafael Swell.	na	na
Jones Cycladenia	<i>Cycladenia humilis var. jonesii</i>	Threatened	NO	No suitable habitat within the lease parcels. No critical habitat has been designated for this species. Endemic to Emery, Garfield, Grand, and Kane Counties in Utah and Coconino County, Arizona. Occurs on gypsiferous saline soils on the Chinle, Cutler, and Summerville Formations. Associated with buckwheat and Mormon Tea, cool desert shrub and juniper communities between 4,400' and 6,000' elevation.	na	na
Last Chance Townsendia	<i>Townsendia aprica</i>	Threatened	NO	No suitable habitat with the lease parcels. No critical habitat has been designated for this species. Endemic to Emery, Sevier, and Wayne Counties, Utah. Occurs on clay or clay silt soils of the Mancos Shale (Bluegate member). Associated with salt desert scrub and pinyon-juniper communities between 6,100' and 8,000' elevation.	na	na
San Rafael Cactus	<i>Pediocactus despainii</i>	Endangered	Yes	Known populations and suitable habitat occur within the Lease parcels. No critical habitat has been designated for this species  Endemic to central Utah in Emery County and a small portion of Wayne County. Occurs on limestone gravels and flakes and desert pavements in association with open pinyon-juniper communities and gramma grass generally between 4,750' and 5,900' elevation. As analyzed in the RMP and the BO, the application of the LNs allow the opportunity to make adjustments at the site-specific level when an APD is received to reduce potential effects to the species.	All	T&E-17: San Rafael Cactus (Pediocactus Despainii)

Table 6. Botany Resources – Parcel Documentation and Applicable Lease Notices and Stipulations						
Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation Or Lease Notice
Winkler Cactus	<i>Pediocactus winkleri</i>	Threatened	Yes	Due to the difficulty in differentiating between San Rafael cactus and Winkler Cactus without genetic work, all the species found within the lease parcels have been determined to be San Rafael cactus. No critical habitat has been designated for this species. Endemic to Emery and Wayne Counties, Utah. Occurs in alkaline hills on small-gravel barrens or clay, desert pavements. Typically associated with salt desert shrub communities and pinyon-juniper between 4,800' and 5,300' elevation.	All	T&E-17: San Rafael Cactus ( <i>Pediocactus Despainii</i> )
Wright Fishhook Cactus	<i>Sclerocactus wrightiae</i>	Endangered	Yes	Known populations and suitable habitat occur within the Lease parcels. No critical habitat has been designated for this species.  Endemic to Utah in Emery Sevier, and Wayne Counties. Occurs on the Bluegate, Tununk, Emery, and Ferron members of the Mancos Shale and the Curtis, Dakota, Morrison, Summerville, and Entrada Formations, often on fine-textured gypsiferous or saline soil. Associated with salt desert shrub and shrub-grass to juniper communities at 4,260' to 5,900' elevation. As analyzed in the RMP and the BO, the application of the LNs allow the opportunity to make adjustments at the site-specific level when an APD is received to reduce potential effects to the species.	All	T&E-15: Wright Fishhook Cactus ( <i>Sclerocactus wrightiae</i> )
<b>BLM Sensitive</b>						
Bolander's Camissonia	<i>Camissonia bolanderi</i>	SS	NO	No plants have been found, associated soils and vegetation communities are absent from the lease parcels. Tidewell draw is over 10 miles from the lease parcels. Endemic to Emery County, Utah. Known only from the type locality at the upper Tidewell Draw where it occurs in association with shadscale and Mormon tea on the Moenkopi Formation at 4,780' elevation.	na	na
Creutzfeldt's cryptantha	<i>Cryptantha creutzfeldtii</i>	SS	Yes	Known populations and suitable habitat occur within the Lease parcels. Endemic to Carbon, Emery, and Sevier Counties, Utah. Occurs in shadscale and mat atriplex communities on the Mancos Formation	All	UT-LN-51 Sensitive Plants

Table 6. Botany Resources – Parcel Documentation and Applicable Lease Notices and Stipulations						
Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation Or Lease Notice
				between 5,250' and 6,500' elevation. Application of the lease notices will provide the opportunity at the development stage to reduce impacts. The species often occurs in isolated patches on relatively flat areas. Roads and pads could be relocated to avoid the populations. In addition the species has been recently found to occur in many areas with high numbers. As analyzed in the RMP and the BO, the application of the LNs allow the opportunity to make adjustments at the site-specific level when an APD is received to reduce potential effects to the species.		
Entrada Rushpink	<i>Lygodesmia grandiflora var. entrada</i>	SS	NO	No suitable habitat within the lease parcels. Endemic to Emery, Grand, and San Juan Counties, Utah. Occurs on the Entrada formation in mixed desert shrub communities and pinyon-juniper woodlands between 4,400' and 4,800' elevation.	na	na
Flat-top Buckwheat	<i>Eriogonum smithii</i>	SS	NO	No suitable habitat within the lease parcels. Endemic to the Colorado Plateau in Emery and Wayne Counties, Utah. Occurs on the Entrada Formation and on seleniferous stabilized dunes. Associated with purple sage, Mormon tea-Indian ricegrass, desert shrub, and rabbitbrush communities from 4,500' to 5,600' elevation.	na	na
Horse Canyon Stickleaf/ Bookcliffs Blazingstar	<i>Mentzelia multicaulus var. librina</i>	SS	NO	No suitable habitat within the lease parcels. Endemic to the Colorado Plateau in Carbon and Emery Counties, Utah. Occurs on the Mancos Shale and Price River Formations. Associated with sagebrush, rabbitbrush, and pinyon-juniper communities at around 6,200' elevation.	na	na
Jones indigo bush	<i>Psorothamnus polydenius var. jonesii</i>	SS	NO	No suitable habitat within the lease parcels. Endemic to Emery and Grand Counties, Utah. Occurs on Blue Gate and Tununk members of Mancos Shale in association with shadscale, mat-saltbush, Mormon tea, and galleta communities. Only known populations occur farther than 10 miles from the lease parcels.	na	na
Maguire's Daisy	<i>Erigeron maguirei</i>	SS	NO	No suitable geology and habitat occur in project area. This species is evenly inventoried and monitored. There are no known populations within the lease parcels. Endemic to Emery, Garfield, and Wayne Counties, Utah. Occurs in slick rock areas of Navajo and Coconino Sandstone Formations in mountain shrub, Douglas fir, ponderosa	na	na

Table 6. Botany Resources – Parcel Documentation and Applicable Lease Notices and Stipulations						
Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation Or Lease Notice
				pine, and juniper woodland communities between 5,400' and 7,100' elevation.		
Mussentuchit Creek Gilia	<i>Aliciella tenuis</i>	SS	NO	No suitable habitat within the lease parcels. Endemic to Emery, Sevier, and Wayne Counties, Utah. Occurs with shadscale, Mormon tea, mule's ears, Indian rice grass, pinyon-juniper, and mountain mahogany communities on fine-textured, pale, poorly cemented limestone of the Curtis Formation, Dakota, and Navajo Sandstones between 5,200' and 7,100' elevation AMSL. This species is only known to occur on the western and southwestern sides of the San Rafael Swell. The nearest population is over 10 miles across unsuitable habitat.	na	na
Peabody Milkvetch	<i>Astragalus pubentissimus var. peabodanus</i>	SS	NO	No suitable habitat within the lease parcels. Endemic to Emery and Grand Counties, Utah. Occurs in pinyon-juniper and mixed desert shrub communities in entrenched channels on the south and west flanks of the Tavaputs Plateau between 4,300' and 5,800' elevation. Distribution is north and east of project area. populations are near Green River Utah, greater than 10 miles away,	na	na
Psoralea globemallow	<i>Sphaeralcea psoraloides</i>	SS	Yes	Small patches of suitable habitat occur within the lease parcels. There are none known populations at this time. Endemic to Colorado Plateau in Emery, Grand, San Juan, and Wayne Counties, Utah. Occurs on Tununk Member of Mancos Shale, Buckhorn Conglomerate, Curtis sandstone, Entrada siltstone, Carmel, and Kaibab Limestone. Associated with Mormon tea, shadscale, and pinyon-juniper communities between 4,000' and 6,300' feet above sea level. As analyzed in the RMP and the BO, the application of the LNs allow the opportunity to make adjustments at the site-specific level when an APD is received to reduce potential effects to the species.	All	UT-LN-51 Sensitive Plants
Thompson talinum/Cedat Mtn flame- flower	<i>Talinum thompsonii</i>	SS	NO	No suitable habitat within the lease parcels. Endemic to the Colorado Plateau in Emery County, Utah. Occurs in siliceous conglomeratic gravels. Associated with pinyon-juniper and ponderosa pine communities at about 7,500' elevation. This species is limited to Cedar Mountain, west of the project area.	na	na

Table 6. Botany Resources – Parcel Documentation and Applicable Lease Notices and Stipulations						
Common Name	Scientific Name	Status	Species/ Suitable Habitat within Parcel (Yes/No)	Documentation for species/potential habitat occurrence in parcels	Lease Parcel ID (Parcel _USO)	Lease Stipulation Or Lease Notice
Trotter's oreoxis	<i>Oreoxis trotteri</i>	SS	NO	No suitable habitat within the lease parcels. Endemic to Emery and Grand Counties, Utah. Associated with warm desert shrub and mixed juniper communities between 4,800' and 6,000 feet elevation.	na	na
Utah spurge	<i>Euphorbia nephradenia</i>	SS	NO	No suitable geology or soils occur in the project area and upper elevation limit is below lowest elevation in project area. Endemic to the Colorado Plateau in Emery, Garfield, Kane, and Wayne Counties in Utah and Colorado. Occurs in dark clay hills, sand, and stabilized dunes primarily from the Tropic Shale and Entrada Formations. Associated with mat-saltbush, blackbrush, Mormon tea, and mixed sandy desert shrub and grassland communities between 3,800' and 4,800' elevation. Known occurrences are south of project site.	na	na

# Species Carried Forward for Additional Analysis

## Wildlife

### White-tailed Prairie dogs

The proposed lease parcels contain potential habitat for white-tailed prairie dogs (WTPD). WTPDs are listed as a sensitive species within the State of Utah and by BLM and are currently undergoing a 12-month Endangered Species Act (ESA) review/finding with the USFWS. WTPDs are a rodent species that inhabit regions of eastern Utah and portions of Wyoming, Colorado, and Montana. In Utah, the WTPD can be found at approximately 1280-2438 m in elevation (Boschen 1986 and Cranney and Day 1994). They form colonies that are typically a few acres, but can range up to several hundred acres (Messmer et al. 1993). WTPD often colonize in irregular patterns over the landscape (Lupis et al. 2007). This irregular mosaic pattern of distribution makes accurate mapping of colony boundaries difficult, thus, accurate occupied habitat is hard to estimate, rather, suitable habitat is mapped using topographic features, substrate variation or the best estimate of the investigator.

Populations of WTPD can fluctuate by more than 50% between consecutive years, which is likely due to vegetation quality and quantity and disease cycles (Menkens 1987 and Lupis et al. 2007). WTPD are mainly herbivorous and obtain most of their needed water from the plants they eat (Lupis et al. 2007). WTPDs can become water stressed during their active season, thus the presence of succulent vegetation may be crucial for prairie dogs to gain sufficient weight to guarantee winter survival and sustaining of WTPD populations (Beck 1994 and Lupis et al. 2007). Plague may also be another reason that colonies show such dramatic fluctuations in densities and shifts in occupied habitats (Seglund et al. 2004). Research on plague epizootics and its effects on WTPD decline and management are still on going and remain a critical question for future management in WTPD conservation (Seglund et al. 2004).

In Utah, WTPD colonies provide habitat for many other vertebrate species, such as burrowing owl. WTPD also serve as a food source for multiple predators, such as ferruginous hawk, golden eagle and coyote. WTPD reproduction generally occurs in late February with young born in late April to early May with and the juveniles emerging above ground around the beginning of late May and June. WTPDs generally hibernate for 4 to 5 months during the winter and may aestivate during mid to late summer.

Several of the limiting factors that were identified for WTPD populations in Utah are disease (i.e. sylvatic plague), changing plant communities and drought (i.e. cheatgrass), and human disturbance (i.e. oil and gas development, agricultural conversion and recreational shooting). Could occur in the area.

Many threats have been cited for WTPD such as oil and gas development, urbanization, agricultural conversion, altered fire regimes, disease, shooting and poisoning, and inadequate regulatory mechanisms. Disturbance from potential development of the lease sale parcels could displace WTPD from burrows, foraging areas, reduce prey species, influence predator species, and loss of habitat may occur. Research has previously indicated that oil and gas development has impacted other species cohabiting the WTPD range including sage grouse (Walker et al. 2007, Naugle et. al 2011, Holloran et al. 2015), pronghorn (Beckmann et al. 2012), mule deer (Sawyer et al. 2006), and other sagebrush obligate passerine bird species (Ingelfinger and Anderson 2004, Gilbert and Chalfoun 2011, Hethcoat and Chalfoun 2015, and Hersey et al. 2017). Hersey et al. 2017 did find support for WTPD occupancy declining closer to wells potentially due to direct habitat loss and direct disturbance. However, they also observed that sites with greater numbers of wells were more likely to be colonized perhaps due to disturbed soils and associated vegetation, which may serve as an attractant. Hersey et al. 2017 concluded that the study showed that

WTPDs persisted on the landscape with no notable decline in occupancy over the last decade even with a higher amount of oil and gas development.

Issuance of leases would not directly influence WTPD or its habitat. However, the issuance of a lease does convey an expectation that oil and gas development could occur.

Future Mitigation (if an APD is submitted):

- The location may be moved 200 m from the original spot in order to reduce impacts to WTPD habitat.

## Botany

### Threatened, Endangered, Candidate, or Sensitive Plant Species

Under Section 7 of the Endangered Species Act (ESA), the BLM is required to consult with the United States Fish and Wildlife Service (USFWS) on any proposed action that may affect federally listed threatened or endangered species or species proposed for listing. Section 7 consultation efforts [a Biological Assessment (BA) and subsequent Biological Opinion (BO)] covering a wide variety of actions, including oil and gas leasing, associated with the current BLM land use plans in Utah was completed October 2008. The BO includes species-specific lease notices that were developed during the Section 7 process and the effects of the actions were analyzed in the EIS for the RMP. When habitat is thought to be present, these lease notices are to be attached to oil and gas leases offered in Utah.

The Competitive Leasing Handbook directs that the BLM attach an ESA stipulation to all leases to protect threatened and endangered species along with other special status species. This stipulation requires that the BLM not approve any ground-disturbing activity until obligations under applicable requirements of the ESA have been fulfilled, including completion of any required procedure for conference or consultation.

43 CFR 3162.1(a) provides the BLM with broad authority to ensure compliance of lessees with orders of the authorized officer issued for the protection of the environment. Conservation measures (lease notices and stipulations) as discussed above increase the likelihood that the BLM and, by association, the lessee, will not have to complete formal Section 7 consultation at the project level. However, it should be noted that BLM may be required to reinstate Section 7 consultation at the project-level, as necessary, to ensure proper management of listed species in the future. Site-specific effects cannot be analyzed until an exploration or development application is received, after leasing has occurred. Until there is a site-specific proposal, there is no action directly or indirectly causing modifications to the land, water, or air.

### San Rafael cactus (*Pediocactus despainii*)

The San Rafael cactus is federally listed as endangered. San Rafael cacti occur primarily on BLM-administered lands managed by the Price Field Office. However, no critical habitat is designated for this species. It is a small sub-globose cactus. The species is usually solitary stemmed, 3.8-6.0 centimeters (cm) tall and 3.0 to 9.5 cm in diameter. Habitat descriptions for this cactus vary. Typically the San Rafael cacti grows in fine textured, mildly alkaline soils rich in calcium derived from limestone substrates of the Carmel Formation and the Sinbad member of the Moenkopi formation and on shale barrens of the Brushy Basin member of the Morrison, Carmel and Dakota geologic formation. The vegetation community is

characterized by open woodlands of scattered Utah juniper and piñon pine with an understory of shrubs and grasses.

Much of the year cacti shrink underground or back to ground surface, defending themselves against an annual cycle of extreme heat, drought and cold. Resurfacing in the spring appears to be dependent on winter and spring moisture. Flowering occurs from March to May with fruiting from May to June. Reproduction, seedling ecology and the overall effects of natural factors, such as disease, parasitism, grazing by native species, natural erosion and potential of vegetative competition on the viability of the species is still largely unknown.

Potential, suitable, and/or occupied habitat for the species has been identified on all of the nominated lease parcels.

#### Wright fishhook cactus (*Sclerocactus wrightiae*)

Wright fishhook cactus is a perennial herb and a member of the cactus family. It is federally listed as endangered. Populations of Wright fishhook cactus occur primarily on lands managed by the BLM Price and Richfield Field Offices and by the National Park Service at Capitol Reef National Park. However, no critical habitat has been designated for the species. Wright fishhook cactus typically grows as a single plant with a branched taproot. The stems are 1 to 8 cm long and 4 to 8 cm in diameter. Flowering occurs from early April through May and fruits are set in June. The stamens have magenta filaments with anthers that are yellow. The ecological amplitude of Wright fishhook cactus is wide, being found from clay badlands up to the pinyon-juniper habitat. Typically it is found on semi-barren sites in salt desert shrub, piñon/juniper woodlands, mixed grassland, and mixed desert shrub communities at elevations of 4200 and 7600 feet. The species occurs on a variety of geologic formations. However, it is most commonly found on the Curtis, Mancos Shale and Summerville Formations.

Potential, suitable, and/or occupied habitat for the species has been identified on all of the nominated lease parcels.

#### Creutzfeldt flower (*Cryptantha creutzfeldtii*)

Creutzfeldt flower is a Utah BLM sensitive plant species, endemic to Carbon and Emery counties. This member of the Borage family is a perennial herb. The plant produces white flowers. Known occurrences of the species are found growing in Mancos shale in shadscale and mat saltbush communities.

Based on appropriate geology and elevation and nearby known locations there is potential habitat in the proposed lease parcels 089, 092, and 095.

#### ***Impacts of No Action Alternative***

The No Action Alternative would prevent future potential impacts relating to lease development of this lease request. Although drilling and production activities on federal land surfaces are restricted to leased parcels, oil and gas exploration may also be authorized on unleased public lands, on a case-by-case basis, pursuant to 43 CFR 3150.0-1. Accordingly, this alternative would

not prevent direct, indirect or cumulative environmental impacts relating to oil and gas exploration activities through denial of the Proposed Action. Additionally, this alternative would not prevent indirect impacts relating to rights of way authorizations to support oil and gas operations on adjacent leased parcels.

### ***Impacts of Proposed Action Alternative***

The issuance of leases would not directly impact threatened, endangered, candidate or sensitive plant species on the parcels. However, as the BLM generally cannot deny all surface use of a lease unless the lease is issued as a No Surface Occupancy stipulation, the issuance of leases does convey an expectation that drilling and development would occur. Surface disturbance associated with drill pads, roads and other associated activities could impact habitat for threatened, endangered, candidate, and BLM sensitive plant species.

Chapter 3 identifies species that could be impacted through future actions on leased parcels. Beyond the potential loss or damage to individuals, these impacts include direct dispersed and indirect impacts including: the loss of suitable habitat for the species and its pollinators; increased competition for space, light, and nutrients with invasive and noxious weed species introduced and spread due to surface disturbing activities; accidental spray or drift of herbicides used during invasive plant control; altered photosynthesis, respiration, and transpiration due to increased fugitive dust resulting from the surface disturbance and project related traffic.

Application of the appropriate species-specific lease notices, T&E-05, 14, 15, 17 (Listed Plant Species), to each of the identified parcels on federal surface would be adequate for the leasing stage to disclose potential restrictions against future authorizations. The mandatory ESA stipulation attached to each parcel would also protect special status plant species. Impacts to the identified species and their respective habitats resulting from future authorizations connected to the proposed leases cannot be analyzed until an exploration or development application is received, individual species surveys are completed, and necessary avoidance and mitigation incorporated into the plan of development or applied to the application as a condition of approval.

## **CUMULATIVE IMPACTS**

NEPA requires federal agencies to consider the cumulative effects of proposals under their review. Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations 40 CFR §1508.7 as “the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency . . . or person undertakes such other actions.” The CEQ has stated that the “cumulative effects analyses should be conducted on the scale of human communities, landscapes, watersheds, or airsheds” using the concept of “project impact zone” (i.e., the area that might be influenced by the Proposed Action).

Offering and issuing leases for the subject parcels, in itself, would not result in cumulative impacts to any resource. Nevertheless, future development of the leases could be an indirect effect of leasing. The RMP/EIS provides the BLM’s analysis of cumulative effects of oil and gas development based on the reasonably foreseeable oil and gas development scenario. This analysis is hereby incorporated by reference. The cumulative impacts analysis in the RMP/EIS accounted for the potential impacts of

development of lease parcels in the planning area as well as past, present and reasonably foreseeable actions known at that time. This analysis expands upon the RMP/EIS analysis by incorporating new information.

### Past, Present, and Reasonably Foreseeable Future Actions

Recreation activities including sightseeing, wildlife viewing, nature viewing, photography, hiking, horseback riding, ATV trail riding, and camping have and will continue to take place in the region. Additionally, there are active grazing allotments located within the proposed lease parcels. There are no reasonably foreseeable future actions that can be anticipated to occur within the proposed lease parcels besides the recreation and grazing activities that are currently taking place.

### White-tailed Prairie Dog,

The CIAA for special status animal species is the Price Field Office. Cumulative impacts are incorporated by reference to PFO RMP. Current and future uses and impacts of the cumulative impact area may include oil and gas development, urbanization and increased recreational impacts. Future development could result in a loss of WTPDs, colonies, and habitat that other species depend on like the burrowing owl. The past, present, and foreseeable future actions with the potential to contribute to surface disturbance include development of new and existing mineral rights or realty actions (for example, pipeline or road rights of way) or the continuation of agricultural activities. As cumulative activities occur, adjacent habitats may be avoided due to human presence. Cumulative activities could also alter potential prairie dogs habitat, making it less suitable for the establishment of colonies, thus affecting burrowing owl. Habitat quality for these species can also be degraded by the introduction of noxious and invasive weeds. Weed invasions may lead to a decrease in the amount of native perennials and bare ground, thereby degrading habitat for WTPD by decreasing visibility, forage quality, and burrow development that affects both burrowing owl. However, weed control efforts would minimize the spread of noxious and invasive weeds. Past, present, and future land uses have reduced and will likely continue to reduce the quality and quantity of habitats for wildlife species. Habitat alteration occurring throughout the range of these species would potentially reduce the ability of such species to recover. Cumulative impacts include habitat fragmentation, loss of prey species, increased predation, and loss of breeding habitat. The No Action Alternative would not result in an accumulation of impacts.

### Threatened, Endangered, Candidate or Sensitive Plant Species

The CIAA for Threatened, Endangered or Candidate Plant Species includes the PFO planning area. However, as suitable and occupied habitats have not been completely mapped and population estimates are largely unknown, accurate disturbance estimates for the CIAA cannot be precisely quantified. Cumulative impacts to Threatened, Endangered or Candidate Plant Species is directly associated with their ongoing habitat losses, sensitivity to disturbance, and declining population numbers. These species would be more sensitive than other, more common species to impacts related to development within the CIAA. Past, present, and reasonably foreseeable surface-disturbing land uses have reduced, and will likely continue to reduce, the quality and quantity of suitable and occupied habitats in the CIAA for Threatened, Endangered or Candidate Plant Species. Based on direct and indirect cumulative impacts, ongoing and future oil and gas development and other land uses such as OHV travel, forage utilization by livestock and wildlife, and noxious weed encroachment and management in the CIAA could cumulatively and incrementally reduce and fragment habitats for Threatened, Endangered or Candidate Plant Species.